



Dart Aerospace Ltd.  
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Canada

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**RBW6521A00138-W142AH-3T**

**Job Sheet 198302**



**Part No:** RBW6521A00138-W142AH-3T **Job Qty:** 1 pcs

**Part Name:** Nut Torque Tool



**Part Weight:** 0 lbs

**Status:** New

**Priority:** Medium

**Job Created:** 7/24/19

**Job Tracking No:**

**Due Date:** 9/25/19

**Created By:** Marie Lajeunesse

**Type:** SOLD

**Description:**

**Note:** DWG RBW6521A00138-W142AH-3T Rev. 5 IPP Rev. A 18.09.25 New issue DP Verify DD

**Ship Via:**

### Bill of Materials

### Job Routing

| Op No | Operation                   | Qty   | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off |
|-------|-----------------------------|-------|------------|----------|-----------|---------|-----------------------|-----------|----------|
|       |                             |       |            |          | Setup Hrs | Run Hrs | Workcenter / Supplier | Lead Time |          |
| 100   | Small Fab - 1               | 1 pcs | 9/25/19    | 9/25/19  | 0.00      | 0.50    | Small Fab - 1         |           | MLL      |
|       |                             |       |            |          |           |         | Small Fab - 2         |           |          |
|       |                             |       |            |          |           |         | Small Fab - 3         |           |          |
|       |                             |       |            |          |           |         | Small Fab - 4         |           |          |
|       |                             |       |            |          |           |         | Small Fab - 5         |           |          |
|       |                             |       |            |          |           |         | Small Fab - 6         |           |          |
|       |                             |       |            |          |           |         | Small Fab - 7         |           |          |
| 110   | QC 5                        | 1 pcs | 9/25/19    | 9/25/19  | 0.00      | 0.00    | QC 5 - 10             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 12             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 17             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 18             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 19             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 22             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 24             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 3              |           |          |
|       |                             |       |            |          |           |         | QC 5 - 43             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 49             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 51             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 58             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 68             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 9              |           |          |
|       |                             |       |            |          |           |         | QC 5 - 50             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 30             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 40             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 61             |           |          |
|       |                             |       |            |          |           |         | QC 5 - 81             |           |          |
| 130   | Packaging 3-1 - Stock - B4B | 1 pcs | 9/25/19    | 9/25/19  | 0.00      | 0.00    | Packaging 3 - 1 - B4B |           |          |
|       |                             |       |            |          |           |         | Packaging 3 - 2 - B4B |           |          |
|       |                             |       |            |          |           |         | Packaging 3 - 3 - B4B |           |          |
|       |                             |       |            |          |           |         | Packaging 3 - 4 - B4B |           |          |
|       |                             |       |            |          |           |         | Packaging 3 - 5 - B4B |           |          |



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**Container No:** S217663



**Part:** RBW6521A00138 - W142AH - 3T

**Job No:** 198302

**Serial No/Batch:** S217663

**Revision:** 5

**Inspector:**

**Exp Date:**

**Instructions:**

**Date:** 09/27/19

**SEP 27 2019 40 9-09**

|     |            |       |         |           |                        |     |
|-----|------------|-------|---------|-----------|------------------------|-----|
|     |            |       |         |           | Packaging 3 - 6 - B4B  |     |
|     |            |       |         |           | Packaging 3 - 7 - B4B  |     |
|     |            |       |         |           | Packaging 3 - 8 - B4B  |     |
|     |            |       |         |           | Packaging 3 - 9 - B4B  |     |
|     |            |       |         |           | Packaging 3 - 10 - B4B | MCC |
|     |            |       |         |           | Packaging 3 - 11 - B4B |     |
|     |            |       |         |           | Packaging 3 - 12 - B4B |     |
|     |            |       |         |           | Packaging 3 - 13 - B4B |     |
|     |            |       |         |           | Packaging 3 - 14 - B4B |     |
|     |            |       |         |           | Packaging 3 - 15 - B4B |     |
|     |            |       |         |           | Packaging 3 - 16 - B4B |     |
|     |            |       |         |           | Packaging 3 - 17 - B4B |     |
|     |            |       |         |           | Packaging 3 - 18 - B4B |     |
|     |            |       |         |           | Packaging 3 - 19 - B4B |     |
|     |            |       |         |           | Packaging 3 - 20 - B4B |     |
|     |            |       |         |           | Packaging 3 - 21 - B4B |     |
|     |            |       |         |           | Packaging 3 - 22 - B4B |     |
|     |            |       |         |           | Packaging 3 - 23 - B4B |     |
|     |            |       |         |           | Packaging 3 - 24 - B4B |     |
|     |            |       |         |           | Packaging 3 - 25 - B4B |     |
|     |            |       |         |           | Packaging 3 - 26 - B4B |     |
|     |            |       |         |           | Packaging 3 - 27 - B4B |     |
|     |            |       |         |           | Packaging 3 - 28 - B4B |     |
|     |            |       |         |           | Packaging 3 - 29 - B4B |     |
|     |            |       |         |           | Packaging 3 - 30 - B4B |     |
|     |            |       |         |           | Packaging 3 - 31 - B4B |     |
|     |            |       |         |           | Packaging 3 - 32 - B4B |     |
|     |            |       |         |           | Packaging 3 - 33 - B4B |     |
|     |            |       |         |           | Packaging 3 - 34 - B4B |     |
|     |            |       |         |           | Packaging 3 - 35 - B4B |     |
|     |            |       |         |           | Packaging 3 - 36 - B4B |     |
| 140 | QC 21 - FG | 1 pcs | 9/25/19 | 0.00 0.00 | QC 21 - FG - 21        |     |
|     |            |       |         |           | QC 21 - FG - 70        |     |
|     |            |       |         |           | QC 21 - FG - 53        |     |

Part Op **100** - (Small Fab) Assemble as per DWG.  
 Descriptions: **110** - (QC5- Inspect part completeness to step on W/O)  
**130** - (Identify as per dwg & Stock Location: \_\_\_\_\_)  
**140** - (QC21- Final Inspection - Work Order Release)

GA  
TBD

SEP 27 2019  
21  
9-59

## Job BOM

| Part / Item                              | Component Name                                                                                     | Quantity      | Operation            | Container |
|------------------------------------------|----------------------------------------------------------------------------------------------------|---------------|----------------------|-----------|
| 90278A411 49                             | Shsb M10 X 1.25 X 8 Ss (Mcmaster)                                                                  | 2 Ea (2 ea)   | 100-Small<br>Fab - 1 | 3216682   |
| 91290A418 45                             | Metric Class 12.9 Socket Head Cap Screw Alloy Stl, M8<br>Thread, 16Mm Length, 1.25Mm Pitch (Mcmas) | 1 Ea (1 ea)   | 100-Small<br>Fab - 1 | 3201169   |
| 92140A116 69                             | Fender Washer 5/16 Id X 1 1/4 Od (Mcmaster)                                                        | 1 Ea (1 ea)   | 100-Small<br>Fab - 1 | 3201228   |
| 92290A230 50                             | Shcs M5 X .8 X 14Mm Steel                                                                          | 12 Ea (12 ea) | 100-Small<br>Fab - 1 | 3201150   |
| 9637K18                                  | Spring 1 1/32 Id X .104 Wire X 2 (Mcmaster)                                                        | 1 Ea (1 ea)   | 100-Small<br>Fab - 1 | 3201114   |
| 98029A038                                | Flat Washer 1" Id X 2" Od Steel (Mcmaster)                                                         | 1 Ea (1 ea)   | 100-Small<br>Fab - 1 | 3201205   |
| RBW6521A00138-W142AH-3T-1 Spline         |                                                                                                    | 1 pcs (1 ea)  | 100-Small<br>Fab - 1 | 5127913   |
| RBW6521A00138-W142AH-3T-11 Wrench        |                                                                                                    | 1 pcs (1 ea)  | 100-Small<br>Fab - 1 | 5207385   |
| RBW6521A00138-W142AH-3T-13 Base          |                                                                                                    | 1 pcs (1 ea)  | 100-Small<br>Fab - 1 | 5209939   |
| RBW6521A00138-W142AH-3T-3 Top Brace      |                                                                                                    | 1 pcs (1 ea)  | 100-Small<br>Fab - 1 | 5209894   |
| RBW6521A00138-W142AH-3T-5 Side Brace     |                                                                                                    | 2 pcs (2 ea)  | 100-Small<br>Fab - 1 | 5202695   |
| RBW6521A00138-W142AH-3T-7 Adjuster       |                                                                                                    | 1 pcs (1 ea)  | 100-Small<br>Fab - 1 | 5206731   |
| RBW6521A00138-W142AH-3T-9 Spanner Socket |                                                                                                    | 1 pcs (1 ea)  | 100-Small<br>Fab - 1 | 5206561   |

## Job Allocations

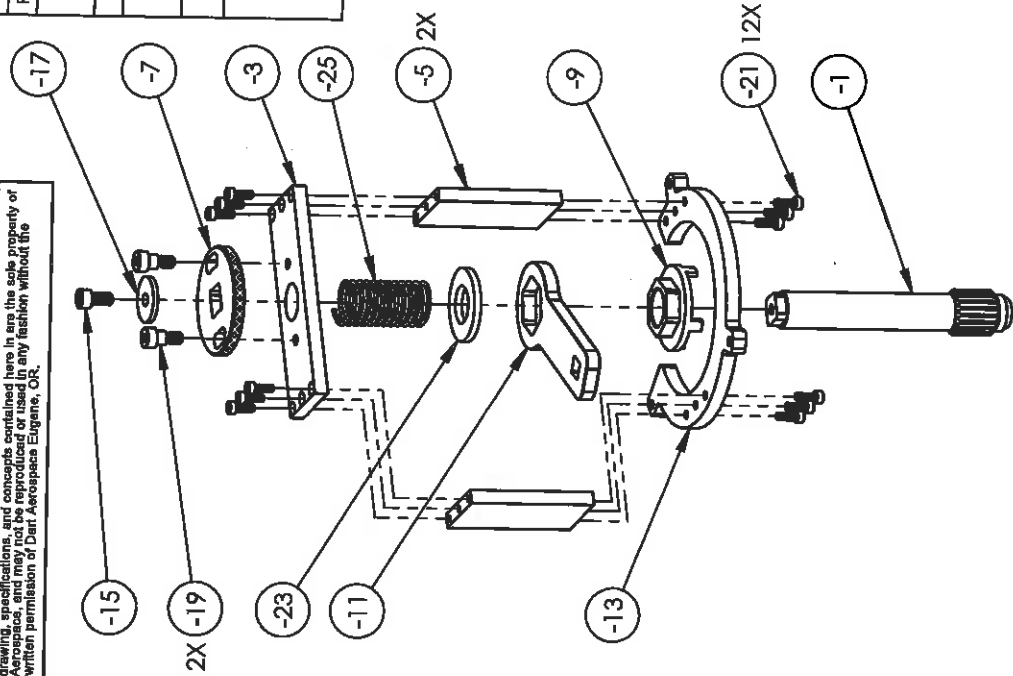
| Operation         | Component Part             | Required | Inventory | Allocated |
|-------------------|----------------------------|----------|-----------|-----------|
| 100-Small Fab - 1 | 90278A411                  | 2        | 2         | 0         |
|                   | 91290A418                  | 1        | 50        | 0         |
|                   | 92140A116                  | 1        | 10        | 0         |
|                   | 92290A230                  | 12       | 25        | 0         |
|                   | 9637K18                    | 1        | 5         | 0         |
|                   | 98029A038                  | 1        | 5         | 0         |
|                   | RBW6521A00138-W142AH-3T-1  | 1        | 3         | 0         |
|                   | RBW6521A00138-W142AH-3T-11 | 1        | 4         | 0         |
|                   | RBW6521A00138-W142AH-3T-13 | 1        | 4         | 0         |
|                   | RBW6521A00138-W142AH-3T-3  | 1        | 4         | 0         |
|                   | RBW6521A00138-W142AH-3T-5  | 2        | 4         | 0         |
|                   | RBW6521A00138-W142AH-3T-7  | 1        | 4         | 0         |
|                   | RBW6521A00138-W142AH-3T-9  | 1        | 5         | 0         |

## Part Specifications

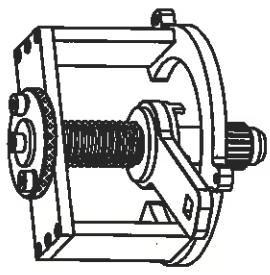
Specifications could not be found.

Plex 9/18/19 8:50 AM dart.boucher.sylvie

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WORK ORDER  
NO. 198302 MWS  
190725



NOTES:  
1. PART OF KIT RBW6505G00331-3T.  
2. REF. AGUSTA T/N: 3T6521A00138-W142AH.



### NUT TORQUE TOOL

| REV     | 5                                                                                                                                                                                                                                                                                                   |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DWG NO. | RBW6521A00138-W142AH-3T                                                                                                                                                                                                                                                                             |
| MATL    | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>XXX ± .006 FRACTIONS ± 1/8<br>XX ± .01 ANGLES ± 1°<br>X ± .1 SURFACES = 125/<br>1. BREAK ALL SHARP EDGES<br>2. DIMENSIONAL LIMITS APPLY<br>3. AFTER PLATING<br>4. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009<br>USED ON MODEL<br>AW139 |
| DATE    | 12/31/2008                                                                                                                                                                                                                                                                                          |
| SCALE   | 1:5                                                                                                                                                                                                                                                                                                 |
| DATE    | 12/31/2008                                                                                                                                                                                                                                                                                          |
| SHEET   | 1 OF 8                                                                                                                                                                                                                                                                                              |

| REV | ECR     | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | DATE      | INITIAL | APPROVED |
|-----|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------|----------|
| 1   |         | -1 ADDED TOLERANCE TO R.125 AND LIMITS FOR 750 SQUARE DRIVE. -7 ADDED CHAMFER 2X .03 X 45°. -9 ADDED 2X R.03 TO I.D. -11 ADDED ENGRAVE NOTE, DELETED CHAMFER AROUND HEX, CHD .03 X 45° TO HAND BUFF EDGES.                                                                                                                                                                                                                                                                                      | 10/3/2012 | RJC     | SE       |
| 2   | 15-0159 | -1 ADDED 4142 Q&T TO MATERIAL CALL OUT, CHD RADII WAS R.125 ± .005-0.000 IS R.130 ± .005-0.000.                                                                                                                                                                                                                                                                                                                                                                                                 | 7/21/2015 | RJC     | JAG      |
| 3   | 16-0034 | UPDATED TO NEW STANDARDS. ADDED OEM REF. -1 ADDED DIM 6.77. -9 CHD DIM WAS 2X 1.4175-1.4205 IS 3X 1.4175-1.4205. CHD DIM WAS 2X 1.4245-1.4260 IS 3X 1.4245-1.4260. -13 CHD DIM WAS .07.319 B.C. IS .07.319 B.C.).                                                                                                                                                                                                                                                                               | 2/15/2016 | DFD     | JAG      |
| 4   | 16-0123 | -1 -3 -5 -7 -9 -11 -13 ADDED FINISH SPEC. -11 CHD MATL WAS 1018/1020 CR IS 4140/4142. ADDED HEAT TREAT.                                                                                                                                                                                                                                                                                                                                                                                         | 8/18/2016 | DEW     | JAG      |
| 5   | 16-0266 | -1 CHD DIM WAS .01.000/.999 S.F. -3 IS .01.000/.999 S.F. -7 IS 2X .752/.747 S.F. -9 CHD MATERIAL WAS 4140/4142 Q&T IS 4140/4142. ADDED HEAT TREAT RC 28-34. -13 CHD DIM WAS .03.000/.009 S.F. -11 IS .03.000/.009 S.F. -13 CHD DIM WAS 2X .758/.753 S.F. -11 IS 2X .758/.753 S.F. -11 IS 3X 1.4205/.1475 S.F. -11 IS 3X 1.4205/.1475 S.F. -13 CHD DIM WAS 3X 1.4260/.14245 S.F. -9 IS 3X 1.4260/.14245 S.F. -11 IS 3X 1.4260/.14245 S.F. -13 CHD MATERIAL WAS 1018/1020 CR IS A36/1018/1020 HR. | 12/6/2016 | RJC     | SM       |

| ASSY QTY | B/O | Part # | UNIT QTY | Description               | Material         | B/O INFORMATION OR SPECIFICATIONS                   | PG. |
|----------|-----|--------|----------|---------------------------|------------------|-----------------------------------------------------|-----|
|          |     | -1     | 1        | SPRUE                     | 4140/4142        |                                                     | 2   |
|          |     | -3     | 1        | TOP BRACE                 | 1018/1020 CR     |                                                     | 3   |
|          |     | -5     | 2        | SIDE BRACE                | 1018/1020 CR     |                                                     | 4   |
|          |     | -7     | 1        | ADJUSTER                  | 1018/1020 CR     |                                                     | 5   |
|          |     | -9     | 1        | SPANNER SOCKET            | 4140/4142        |                                                     | 6   |
|          |     | -11    | 1        | WRENCH                    | 4140/4142        |                                                     | 7   |
|          |     | -13    | 1        | BASE                      | A36/1018/1020 HR |                                                     | 8   |
|          | B/O | -15    | 1        | SOCKET HEAD CAP SCREW     | STEEL            | M8X1.25 X 16mm (MCMaster-CARR #91200A418)           | 1   |
|          | B/O | -17    | 1        | FENDER WASHER             | STEEL            | Ø5/16 I.D. X Ø1-1/4 O.D. (MCMaster-CARR #92140A116) | 1   |
|          | B/O | -19    | 2        | SOCKET HEAD SHOULDER BOLT | S.S.             | M8X1.25 X 8mm (MCMaster-CARR #90278A411)            | 1   |
|          | B/O | -21    | 12       | SOCKET HEAD CAP SCREW     | S.S.             | M5X0.8 X 14mm (MCMaster-CARR #92290A230)            | 1   |
|          | B/O | -23    | 1        | FLAT WASHER               | STEEL            | Ø1 I.D. X Ø2 O.D. (MCMaster-CARR #98027A038)        | 1   |
|          | B/O | -25    | 1        | COMPRESSION SPRING        | STEEL            | Ø1-7/32 X Ø.091 WIRE X 2 (MCMaster-CARR #9637K18)   | 1   |

Entered: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐



| Job: _____<br>Part No. _____                                                                                                                                                                                                                                                                                                                                                                      |  | DISPOSITION                     |  | DEPARTMENT/PROCESS    |  |                   |  | Engineering                      |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------|--|-----------------------|--|-------------------|--|----------------------------------|--|----------|--|---------------------|--|---------------------|--|---------------|--|-----------------|--|---------------|--|------------------|--|------------------|--|
| Date: _____                                                                                                                                                                                                                                                                                                                                                                                       |  | Sequence #: _____               |  | QTY Affected: _____   |  | MRB (QS1042)      |  | Water Jet<br>Supplier<br>Quality |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                  |  | Disposition                     |  |                       |  |                   |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| <b>Root Cause</b><br><table border="1"><tr><td>Operator</td><td></td></tr><tr><td>Manufacturing Process</td><td></td></tr><tr><td>Equip/Tooling</td><td></td></tr><tr><td>Handling/Preservation</td><td></td></tr><tr><td>Material</td><td></td></tr><tr><td>Product Improvement</td><td></td></tr><tr><td>Process Improvement</td><td></td></tr><tr><td>Human Factors</td><td></td></tr></table> |  | Operator                        |  | Manufacturing Process |  | Equip/Tooling     |  | Handling/Preservation            |  | Material |  | Product Improvement |  | Process Improvement |  | Human Factors |  | Pressure/Forced |  | Contamination |  | Power Loss/Surge |  | Positioned Wrong |  |
|                                                                                                                                                                                                                                                                                                                                                                                                   |  | Operator                        |  |                       |  |                   |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Manufacturing Process                                                                                                                                                                                                                                                                                                                                                                             |  |                                 |  |                       |  |                   |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Equip/Tooling                                                                                                                                                                                                                                                                                                                                                                                     |  |                                 |  |                       |  |                   |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Handling/Preservation                                                                                                                                                                                                                                                                                                                                                                             |  |                                 |  |                       |  |                   |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Material                                                                                                                                                                                                                                                                                                                                                                                          |  |                                 |  |                       |  |                   |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Product Improvement                                                                                                                                                                                                                                                                                                                                                                               |  |                                 |  |                       |  |                   |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Process Improvement                                                                                                                                                                                                                                                                                                                                                                               |  |                                 |  |                       |  |                   |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Human Factors                                                                                                                                                                                                                                                                                                                                                                                     |  |                                 |  |                       |  |                   |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Bending                                                                                                                                                                                                                                                                                                                                                                                           |  | Misaligned/off center           |  | Folio/Program         |  | Outside Tolerance |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Crushing                                                                                                                                                                                                                                                                                                                                                                                          |  | BOM/Route                       |  | Grain Direction       |  | Drawing           |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Cracks                                                                                                                                                                                                                                                                                                                                                                                            |  | Broken/Damage/Defect            |  | Weld                  |  | Finish            |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Crimp/Kink/Ripple/Wave/Twist                                                                                                                                                                                                                                                                                                                                                                      |  | Incomplete/Unclear Instructions |  | Wrong Stock Pulled    |  | Part Lost/Missing |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Marks/Chatter                                                                                                                                                                                                                                                                                                                                                                                     |  | Drill Holes                     |  | Out of Sequence       |  | Misread           |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Mislabeled                                                                                                                                                                                                                                                                                                                                                                                        |  | Fit/Function                    |  | Off-set/Set-up        |  |                   |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Other/Details:                                                                                                                                                                                                                                                                                                                                                                                    |  |                                 |  |                       |  |                   |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| Completed By                                                                                                                                                                                                                                                                                                                                                                                      |  | Lead hand / Supervisor          |  |                       |  |                   |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |
| QC / QA Coordinator                                                                                                                                                                                                                                                                                                                                                                               |  |                                 |  |                       |  |                   |  |                                  |  |          |  |                     |  |                     |  |               |  |                 |  |               |  |                  |  |                  |  |